CITY OF EVERETT
STORMWATER MANAGEMENT PROGRAM (SWMP)
2016 Version
Permit Number WAR04-5515

Introduction:

This document has been prepared to meet the City of Everett's Western Washington Phase II Municipal Stormwater Permit (Permit) requirement for written documentation of the City's Stormwater Management Program (SWMP).

The City's SWMP is intended to reduce the discharge of pollutants from the City's Municipal Separate Storm Sewer System (MS4) to the maximum extent practicable (MEP), meet Washington State's All Known, Available and Reasonable Methods of Treatment and Control (AKART) requirements, and protect water quality. This goal is accomplished by the inclusion of all Permit SWMP components, minimum measures, and implementation schedules into the City's SWMP.

In compliance with Permit requirements, where the City is already implementing actions or activities called for in this document, the City will continue those actions or activities until revised in accordance with the schedule contained in the permit.

As part of the implementation of the City's SWMP, the City will gather, track, maintain and use information on an on-going basis to evaluate the SWMP development, implementation, permit compliance, and to set priorities. This document will be updated annually for submittal with the City's Annual Report to Ecology.

NOTE: Language from the permit will appear in regular type.

Language constituting the City's program is italicized and in color.

S5. STORMWATER MANAGEMENT PROGRAM FOR CITIES, TOWNS, AND COUNTIES

A. Each Permittee shall develop and implement a Stormwater Management Program (SWMP). A SWMP is a set of actions and activities comprising the components listed in S5 and any additional actions necessary, to meet the requirements of applicable TMDLs pursuant to S7 *Compliance with TMDL Requirements,* and S8 *Monitoring and Assessment*. This section applies to all cities, towns, and counties covered under this Permit, including cities, towns, and counties that are Co-Permittees. Where the term "Permittee" is used in this section the requirements apply to all cities, towns, and counties covered under this Permit.

New Permittees subject to this permit as described in S1.D.1.b shall fully meet the requirements in S5 as modified in footnotes below, or as specified in an alternate schedule as a condition of coverage by Ecology. Permittees obtaining coverage after the issuance date of this permit shall fully meet the requirements in S5 as specified in an alternate schedule as a condition of coverage by Ecology.

1. At a minimum the Permittee's SWMP shall be implemented throughout the geographic area subject to this Permit as described in S1.A.[1]

2. Each Permittee shall prepare written documentation of the SWMP, called the SWMP Plan. The SWMP Plan shall be organized according to the program components in S5.C or a format approved by Ecology, and shall be updated at least annually for submittal with the Permittee's annual reports to Ecology (see S9 Reporting and Record Keeping). The SWMP Plan shall be written to inform the public of the planned SWMP activities for the upcoming calendar year, and shall include a description of:

    a. Planned activities for each of the program components included in S5.C.

    b. Any additional planned actions to meet the requirements of applicable TMDLs pursuant to S7 Compliance with Total Maximum Daily Load Requirements.

    c. Any additional planned actions to meet the requirements of S8 Monitoring.

3. The SWMP shall include an ongoing program for gathering, tracking, maintaining, and using information to evaluate SWMP development, implementation and permit compliance and to set priorities.

    a. Each Permittee shall track the cost or estimated cost of development and implementation of each component of the SWMP.[2] This information shall be provided to Ecology upon request.

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[1] New Permittees shall fully develop and implement the SWMP in accordance with the schedules contained in this section no later than February 2, 2018.

b. Each Permittee shall track the number of inspections, official enforcement actions and types of public education activities as required by the respective program component. This information shall be included in the annual report.

4. Permittees shall continue implementation of existing stormwater management programs until they begin implementation of the updated stormwater management program in accordance with the terms of this permit, including implementation schedules.

5. Coordination among Permittees

a. Coordination among entities covered under municipal stormwater NPDES permits may be necessary to comply with certain conditions of the SWMP. The SWMP should include, when needed, coordination mechanisms among entities covered under a municipal stormwater NPDES permit to encourage coordinated stormwater-related policies, programs and projects within adjoining or shared areas, including:

i. Coordination mechanisms clarifying roles and responsibilities for the control of pollutants between physically interconnected MS4s covered by a municipal stormwater permit.

ii. Coordinating stormwater management activities for shared water bodies among Permittees to avoid conflicting plans, policies and regulations.

b. The SWMP shall include coordination mechanisms among departments within each jurisdiction to eliminate barriers to compliance with the terms of this permit. Permittees shall include a written description of internal coordination mechanisms in the Annual Report due no later than March 31, 2015.

B. The SWMP shall be designed to reduce the discharge of pollutants from regulated small MS4s to the MEP, meet state AKART requirements, and protect water quality.

C. The SWMP shall include the components listed below. To the extent allowable under state or federal law, all components are mandatory for city, town or county Permittees covered under this permit.

[2] New Permittees shall begin implementing the requirements of S5.A.3.a no later than August 1, 2015.

1. **Public Education and Outreach**

The SWMP shall include an education and outreach program designed to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts and encourage the public to participate in stewardship activities. The education program may be developed and implemented locally or regionally.

The minimum performance measures are:

a. Each Permittee shall provide an education and outreach program for the area served by the MS4. The program shall be designed to educate target audiences about the stormwater problem and provide specific actions they can follow to minimize the problem.[3]

i. To build general awareness, Permittees shall select from the following target audiences and subject areas:

(a) General public (including school age children), and businesses (including home-based and mobile businesses)

- General impacts of stormwater on surface waters.
- Impacts from impervious surfaces.
- Impacts of illicit discharges and how to report them.
- Low impact development (LID) principles and LID BMPs.
- Opportunities to become involved in stewardship activities.

(b) Engineers, contractors, developers and land use planners

- Technical standards for stormwater site and erosion control plans.
- LID principles and LID BMPs.
- Stormwater treatment and flow control BMPs/facilities.

ii. To effect behavior change, Permittees shall select from the following target audiences and BMPs:

(a) General public (which may include school age children), businesses (including home-based and mobile businesses)

[3] New Permittees shall begin implementing the requirements of S5.C.1 no later than August 1, 2015.

- Use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.
- Equipment maintenance.
- Prevention of illicit discharges.

(b) Residents, landscapers and property managers/owners

- Yard care techniques protective of water quality.
- Use and storage of pesticides and fertilizers and other household chemicals.
- Carpet cleaning and auto repair and maintenance.
- Vehicle, equipment and home/building maintenance.
- Pet waste management and disposal.
- LID principles and LID BMPs.
- Stormwater facility maintenance.
- Dumpster and trash compactor maintenance.

b. Each Permittee shall create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings and education activities.

c. Each Permittee shall measure the understanding and adoption of the targeted behaviors for at least one target audience in at least one subject area. No later than February 2, 2016, Permittees shall use the resulting measurements to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behaviors.[4] Permittees may meet this requirement individually or as a member of a regional group.

The City of Everett has had dedicated education personnel and stormwater education programs for some time prior to issuance of the first Phase 2 permit in 2007. The City's stormwater education programs have expanded to include newer elements such as LID principles and BMPs. This city implements social marketing strategies, interwoven with traditional marketing approaches to build awareness and target behavior change. Additionally, the city continues to

[4] By no later than August 1, 2017, new Permittees shall begin using the results of measurements to direct education and outreach resources more effectively, as well as to evaluate changes in adopted behaviors.

participate in the collaborative efforts of STORM (STormwater Outreach for Regional Municipalities) to develop and implement regional public awareness campaigns, share program ideas and stormwater outreach across multiple municipalities and broaden the knowledge base of regional partners through annual workshops and symposiums.

COE Stormwater and Public Outreach Program for 2016-2018

Goal

The goal of COE Stormwater and Public Education and Outreach Program is to reduce or eliminate behaviors and practices that cause or contribute to stormwater pollution.

Objective

The COE will develop and implement public education and outreach activities to achieve this goal by:

1. *Focusing on specific local pollution problems to identify behaviors to target.*
2. *Identifying specific target audiences to develop appropriate messages.*
3. *Collaborating with other communities that share audiences, geography, pollution problems or natural resources to achieve:*
    - *Consistent messaging,*
    - *Shared access to media,*
    - *Shared costs and staff time.*
4. *Measuring the effectiveness of the program and changing the program if necessary to achieve the desired goal.*

Method

Education and outreach efforts will be prioritized to target the following audiences and subject areas:

<u>1. General Public (all audiences) - General knowledge that all citizens and employees should know.</u>

Target knowledge areas for general public:

- *Knowledge of Green Stormwater Infrastructure (or LID) principles and BMPs.*
- *General impacts of stormwater flows into surface waters.*
- *Impacts from impervious surfaces.*

- *Available stewardship opportunities in the local community.*

Target behavior areas for general public:

- *Pet waste pickup and proper disposal*
- *Vehicle maintenance*
- *Car washing*
- *Dumping and littering*
- *Household hazardous waste use, storage, and disposal*
- *Preservation of pervious surfaces*
- *Use of LID principles to prevent pollution runoff*

2. Businesses – including home-based and mobile businesses

Target knowledge areas for businesses:

- *Knowledge of mechanics of storm drains – where do they go.*
- *General impacts of stormwater flows into surface waters.*
- *Purpose and function of stormwater ponds.*
- *Impacts of impervious surfaces.*
- *BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps, and other hazardous materials.*
- *Impacts of illicit discharges and how to report them.*
- *Available stewardship opportunities in the local community.*

Target behavior areas for businesses:

- *BMPs for use, storage, and disposal of automotive chemicals, hazardous cleaning supplies, carwash soaps, and other hazardous materials.*
- *Equipment maintenance (including dumpster and trash compactor maintenance).*

3. Residents, landscapers and property managers/owners

Target knowledge areas for residents, landscapers and property managers/owners:

- *Knowledge of mechanics of storm drains – where do they go.*
- *General impacts of stormwater flows into surface waters.*

- *Purpose and function of stormwater ponds.*
- *Impacts from impervious surfaces.*
- *BMPs for use, storage, and of pesticides and fertilizers.*
- *BMPs for auto repair and maintenance.*
- *BMPs for converting impervious to pervious surfaces*
- *Knowledge of Green Stormwater Infrastructure (or LID) principles and BMPs.*

Target behavior areas for residents, landscapers and property managers/owners:

- *Yard and lawn care techniques.*
- *Vehicle and equipment maintenance and repair*
- *Pet waste pickup*
- *Home maintenance practices; including the use and storage of pesticides, fertilizers and other household chemicals*

4. Engineers, contractors, developers, review staff and land-use planners

Targeted knowledge areas for the above:

- *Technical standards for stormwater site and erosion control plans.*
- *Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.*

Targeted behavior areas:

- *Technical standards for stormwater site and erosion control plans.*
- *Low impact Development techniques, including site design, pervious paving, retention of forests and mature trees.*

NOTE: The City will largely depend upon classes offered by Ecology for education of outside engineers, contractors and developers on the above two techniques and standards.

Continuing programs/activities:

- *Car was kits (General Public/Businesses)*
- *Storm drain marking (Volunteer program)*
- *Volunteer litter patrol (Adopt-a-Street program - volunteer)*

- *Mutt Mitt Stations (Volunteer-based program)*
- *General communication through generation and update of city literature.*
- *Elementary, middle school and high school classroom presentations*
- *Participate in public events, highlighting stormwater health*
- *Natural yard care workshops*
- *Rain garden tours*
- *Rain barrel make-your-own workshops and one-day sales*
- *Landscape Professional Workshop: Rain Garden Design & I Installation*
- *Rain garden rebates for residential homeowners*
- *Residential downspout disconnection*
- *Commercial surface water pollution prevention technical assistance*
- *Local Source Control program provided by Snohomish Health District for businesses generating small quantities of hazardous waste*
- *Stormwater maintenance and best management practices technical outreach through the municipal stormwater operations and maintenance and private drainage inspection programs.*
- *Development services, stormwater construction and development consultation*
- *Participating in regional efforts, such as STORM and Eco-NET, to develop programs and materials geared towards adopted stormwater BMP's.*

Planned programs/activities:

- *Telephone survey identifying the general public's understanding of LID principles and BMP.*
- *Devise and implement marketing strategies to convince target audiences to preserve pervious areas and potentially convert impervious surfaces with LID alternatives.*
- *Expand local partnerships to increase pervasiveness and consistency of pet waste messaging. Increase messaging and frequency of pet waste messaging for the general public.*
- *Invigorate and expand storm drain marking program through adoption of the revised curriculum created by Pacific Education*

Institute and STORM members, along with implementing a program targeted to businesses to mark their storm drains.

- *Create materials and literature on illicit discharge and dumpster maintenance.*
- *Explore new partnerships with local entities to implement a series of homeowner workshops. These workshops would have a focus on managing stormwater systems, hazardous waste use, storage and disposal, energy/water conservation, seasonal issues, etc. Workshop would be free,with give-aways to attract the general public.*

Stewardship Opportunities:

- *Partner with local organizations to encourage residents to participate in local activities.*
- *Storm drain marking (Volunteer program)*
- *Volunteer litter patrol (Adopt-a-Street program - volunteer)*
- *Mutt Mitt Stations (Volunteer-based program)*

Measurability:

To satisfy the NPDES requirement (S5C.1.ii.c), the city of Everett partnered with Snohomish County and thirteen other municipalities on their GROSS grant, Natural Yard Care: Comparison and Evaluation of Regional Programs. This grant delivered residential Natural Yard Care workshops in 2014 to a targeted Everett audience, along with other Snohomish County municipalities, and measured the understanding and adoption of targeted behaviors. The targeted behaviors to be measured were selected from the 5 Steps of Natural Yard Care. Results from the evaluations of targeted behavior change were shared and assessed in 2015 by the participating entities.

Based on information gathered from the Natural Yard Care evaluation and recommendations put forth by the Cascadia Consulting Group, the City of Everett plans to direct education and outreach resources to create a more expansive natural yard care series for Everett residents. In addition to a two or three part lecture series, the City of Everett (along with our partners, WSU Extension and Snohomish Conservation District) will offer a day of outdoor demonstrations of selected topics such as; using an aerator, applying lime to lawn, reading/interpreting soil test, preparing a soil test, etc. The goal is to pilot this type of program in Fall 2016 or in 2017.

2. **Public Involvement and Participation**

Permittees shall provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. Each Permittee shall comply with applicable state and local public notice requirements when developing elements of the SWMP.

The minimum performance measures are:

a. Permittees shall create opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the Permittee's SWMP.[5]

The City has in place processes to create opportunities for the public to have input on the SWMP. The draft SWMP is sent via our Office of Neighborhoods to the different Neighborhood Associations, posted on the City website, and advertised in the local paper for comments. Comments received are considered with regard to SWMP changes, implementation, and the permit requirements.

b. Each Permittee shall post on their website their SWMP Plan and the annual report required under S9.A no later than May 31 each year. All other submittals shall be available to the public upon request. To comply with the posting requirement, a Permittee that does not maintain a website may submit the updated SWMP in electronic format to Ecology for posting on Ecology's website.

The 2016 SWMP and the 2015 Annual Report will be posted to the City's website.

3. **Illicit Discharge Detection and Elimination**

The SWMP shall include an ongoing program designed to prevent, detect, characterize, trace and eliminate illicit connections and illicit discharges into the MS4.

The minimum performance measures are:

a. Mapping of the MS4 shall continue on an ongoing basis.[6] MS4 maps shall be periodically updated. Update maps if necessary to meet the requirements of this section no later than February 2, 2018. At a minimum, maps shall include the following information:

[5] New Permittees shall develop and begin to implement requirements of S5.C.2.a no later than August 1, 2014.

[6] New Permittees shall meet the requirements to map the MS4 according to S5.C.3.a no later than February 2, 2018, except where otherwise noted in this section.

i. Known MS4 outfalls and known MS4 discharge points.

ii. Receiving waters, other than ground water.

iii. Stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee.

iv. Tributary conveyances to all known outfalls and discharge points with a 24 inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. The following attributes shall be mapped:

- Tributary conveyance type, material, and size where known.
- Associated drainage areas.
- Land use.

v. All connections to the MS4 authorized or allowed by the Permittee after February 16, 2007.[7]

vi. Connections between the MS4 owned or operated by the Permittee and other municipalities or public entities.

vii. Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters.

For items i. thru vii. above:

The City mapping process is continual, done via information from internal workgroups of the Public Works Department (Engineering, Public Services (permitting and inspection), Resource and Program Management, Maintenance, etc.) as part of routine work product, but also from field technicians who note errors in the field that need correction. Information from other departments in the City, such as the Planning Department, is also utilized in this effort. Utility Mapping in Public Works handles all additions, removals, and corrections for this mapping.

We will continue to utilize our mapping resources as a means to improve efficiency in the maintenance of stormwater infrastructure via coordination of field inventory and maintenance checklists in our electronic maintenance management data system, which is interconnected to the City's GIS system.

[7] New Permittees shall meet the requirements of S5.C.3.a.v. after August 1, 2013 for all connections to the MS4 authorized after August 1, 2013.

viii. To the extent consistent with national security laws and directives, each Permittee shall make available to Ecology upon request, MS4 map(s) depicting the information required in S5.C.3.a.i through vi above. The preferred format for mapping will be an electronic format with fully described mapping standards. An example description is available on Ecology website.

The City will provide maps as requested by Ecology, although format may differ slightly.

ix. Upon request, and to the extent appropriate, Permittees shall provide mapping information to federally-recognized Indian Tribes, municipalities, and other Permittees. This permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by federally-recognized Indian Tribes, municipalities, and other Permittees.

The City will provide mapping information to federally-recognized Indian Tribes, municipalities, and other permittees.

b. Each Permittee shall implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the Permittee's MS4 to the maximum extent allowable under state and federal law.[8]

i. Allowable Discharges: The regulatory mechanism does **not** need to prohibit the following categories of non-stormwater discharges:

- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(b)(20))
- Uncontaminated pumped ground water
- Foundation drains
- Air conditioning condensation
- Irrigation water from agricultural sources that is commingled with urban stormwater
- Springs
- Uncontaminated water from crawl space pumps
- Footing drains

[8] New Permittees shall meet the requirements of S5.C.3.b no later than February 2, 2016.

- Flows from riparian habitats and wetlands
- Non-stormwater discharges authorized by another NPDES or state waste discharge permit
- Discharges from emergency fire fighting activities in accordance with S2 Authorized Discharges

ii. Conditionally Allowable Discharges: The regulatory mechanism may allow the following categories of non-stormwater discharges only if the stated conditions are met:

- Discharges from potable water sources, including but not limited to water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.
- Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities (see section S5.C.1) and water conservation efforts.
- Dechlorinated swimming pool, spa and hot tub discharges. The discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.
- Street and sidewalk wash water, water used to control dust, and routine external building washdown that does not use detergents. The Permittee shall reduce these discharges through, at a minimum, public education activities (see section S5.C.1) and/or water conservation efforts. To avoid washing pollutants into the MS4, Permittees shall minimize the amount of street wash and dust control water used.
- Other non-stormwater discharges. The discharges shall be in compliance with the requirements of a pollution prevention plan reviewed by the Permittee, which addresses control of such discharges.

iii. The Permittee shall further address any category of discharges in (i) or (ii) above if the discharges are identified as significant sources of pollutants to waters of the State.

iv. The ordinance or other regulatory mechanism shall include escalating enforcement procedures and actions.

v. The Permittee shall implement a compliance strategy that includes informal compliance actions such as public education and technical assistance as well as the enforcement provisions of the ordinance or other regulatory mechanism. To implement an effective compliance strategy, the Permittee's ordinance or other regulatory mechanism may need to include the following tools:

- The application of operational and/or structural source control BMPs for pollutant generating sources associated with existing land uses and activities where necessary to prevent illicit discharges. The source control BMPs referenced in this subsection are in Volume IV of the *Stormwater Management Manual for Western Washington*, or an equivalent manual approved by Ecology under the 2013 Phase I Permit.

- The maintenance of stormwater facilities which discharge into the Permittee's MS4 in accordance with maintenance standards established under S5.C.4 and/or S5.C.5 where necessary to prevent illicit discharges.

vi. The Permittee's ordinance or other regulatory mechanism in effect as of the effective date of this permit shall be revised if necessary to meet the requirements of this section no later than February 2, 2018.

For section b., City of Everett Code Chapter 14.56 Surface Water System has been in place since 1990. This code provides for pollutant discharge prohibition, correction of conditions, liability determination, maintenance and operation of private systems, and enforcement and penalties, and has a structure for appeals. We modified and adopted a revised ordinance in 2009 to comply with 2007 permit requirements, and have been working with other City departments, in particular the Code Enforcement section of our Police Department, for fair and timely enforcement actions if violations take place. Unless an egregious violation putting human and environmental health at imminent risk is taking place and must be halted immediately, our first approach is education of the party involved with the violation, since changing the behavior so it does not happen again is a primary motivation. Source controls are also the primary means of our compliance strategy, as it is always better to address issues at their source rather than try to clean them

up after discharge. EMC 14.56, in concert with other city codes, has been working well for us since our 2009 revision, and we currently do not anticipate an update to this code.

With regard to water conservation efforts, Everett is the second largest drinking water provider in the state, and has a well-established water conservation/education program, including: classroom presentations, website messaging and linked educational materials, distribution of indoor and outdoor water conservation kits, and summer yard watering calendars (even in non-drought years), participation in local fairs and community events.

The City also offers Natural Yard Care classes (mentioned in the Public Education section above) that teach techniques for harvesting rainwater for use in the yard, and use of native and low water plants. Rain barrel sales and make it-take it workshops are also available from the City under our Green Stormwater Infrastructure program.

c. Each Permittee shall implement an ongoing program designed to detect and identify non-stormwater discharges and illicit connections into the Permittee's MS4.[9] The program shall include the following components:

   i. Procedures for conducting investigations of the Permittee's MS4, including field screening and methods for identifying potential sources.

      The Permittee shall implement a field screening methodology appropriate to the characteristics of the MS4 and water quality concerns. Screening for illicit connections may be conducted using: *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, October 2004, or another methodology of comparable or improved effectiveness. The Permittee shall document the field screening methodology in the relevant Annual Report.

   ii. All Permittees, except for the City of Aberdeen, shall complete field screening for at least 40% of the MS4 no later than December 31, 2017,[10] and on average 12% each year thereafter. The City of

[9] New Permittees shall fully implement the requirements of S5.C.3.c no later than February 2, 2018, except where otherwise noted in this section.

[10] New Permittees shall complete S5.C.3.c.i requirements for field screening covering at least 12% of the MS4 within the Permittee's coverage area no later than December 31, 2017, and on average 12% each year thereafter.

Aberdeen shall complete field screening for at least 40% of the system no later than June 30, 2018 and on average 12% each year thereafter.

City personnel who conduct screening utilize the above mentioned CWP document and the Illicit Connection and Illicit Discharge Field Screening and Source Tracing Guidance Manual, DOE, 2013 for procedures.

In 2016 our current screening program, will consist of observation during inspections of stormwater facilities on private properties, and inspection of public structures such as catch basins, ditches, and ponds.

iii. A publicly listed and publicized hotline or other telephone number for public reporting of spills and other illicit discharges.[11]

The 24-hour phone number for reporting spills and illicit discharges is (425) 257-8821.

iv. An ongoing training program for all municipal field staff, who, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge and/or illicit connection to the MS4, on the identification of an illicit discharge and/or connection, and on the proper procedures for reporting and responding to the illicit discharge and/or connection. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of the trainings provided and the staff trained.[12]

For staff which may be present in the field, but which are not directly involved in water quality activities (such as Police and Fire Departments, building and construction inspectors, etc.), we provide training on recognizing water quality problems, and provide them with contacts to call if they see anything that needs to be investigated. This training will be updated in 2016.

[11] New Permittees shall implement the requirements of S5.C.3.c.ii no later than August 1, 2015.

[12] New Permittees shall develop and begin implementing the ongoing training program described in S5.C.3.c.iii no later than February 2, 2016.

v. Permittees shall inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste.[13]

This is addressed in the Public Education section above, and in the Annual Report. Additionally in 2016 a City IDDE webpage will be added to the City website.

d. Each Permittee shall implement an ongoing program designed to address illicit discharges, including spills and illicit connections, into the Permittee's MS4.[14] The program shall include:

i. Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee. Procedures shall address the evaluation of whether the discharge must be immediately contained and steps to be taken for containment of the discharge.

ii. Procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures.

iii. Procedures for eliminating the discharge; including notification of appropriate authorities; notification of the property owner; technical assistance; follow-up inspections; and use of the compliance strategy developed pursuant to S5.C.3.b.v, including escalating enforcement and legal actions if the discharge is not eliminated.

iv. Compliance with the provisions in (i), (ii), and (iii), above, shall be achieved by meeting the following timelines:

- Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment, consistent with General Condition G3.

- Investigate (or refer to the appropriate agency with the authority to act) within 7 days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge.

- Initiate an investigation within 21 days of any report or discovery of a suspected illicit connection to determine the source of the

[13] New Permittees shall inform public employees, businesses, and the general public of hazards associated with illicit discharges no later than February 2, 2017.

[14] New Permittees shall fully develop and implement the requirements of S5.C.3.d no later than February 2, 2018.

connection, the nature and volume of discharge through the connection, and the party responsible for the connection.

- Upon confirmation of an illicit connection, use the compliance strategy in a documented effort to eliminate the illicit connection within 6 months. All known illicit connections to the MS4 shall be eliminated.

The City has a 24-hour reporting hotline (425-257-8821), continuously manned by a dispatch operator, for citizens to call for spill, road, and utility emergency response. Each reported spill and call is entered and tracked via a Service Request in our maintenance management data system. Assignment of response is then routed to appropriate personnel from an established list, and city crews respond 24 hours a day (by call out, if after hours) to investigate each reported event that may affect surface waters.

City response includes investigating and verifying that a spill or discharge occurred, spill or discharge clean-up (if within public right-of-way), notifying private parties, remedying the cause, notifying the affected public, sign posting if appropriate, and scheduling additional maintenance or actions if needed for City-responsible spills.

Spills are reported as required by Ecology and other regulatory agencies (through the ERTS process). Other complaints or concerns (such as drainage issues, actions of neighbors, etc.) are prioritized based on severity, or the convenience of the reporting party, but most are investigated within 24 hours.

If an illicit connection is found, Public Works and Code Enforcement staff work with the discharging party and owner (may be different parties) to remedy the connection. In some instances, it is necessary to immediately order a cessation of discharge (for example, discharge of raw sewage to City ditch or faulty marine toilet and washing machine discharge to waterway), and then work on alternative, compliant discharge strategies.

e. Permittees shall train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections, to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements or staffing. Permittees shall document and maintain records of the training provided and the staff trained.[15]

[15] New Permittees shall meet the requirements of S5.C.3.e no later than February 2, 2016.

The staff that provide such IDDE services are trained on-the-job, in the class room, and follow-up with qualified employees. As for all jurisdictions, safety is our primary concern for our staff, so safety training on all aspects of their jobs is frequent. When new procedures or materials (such as the Illicit Connection and Illicit Discharge Field Screening and Source Tracking Guidance Manual, DOE, 2013) becomes available, it is provided to appropriate personnel (including temporary workers) during crew training, and integrated into the inspection program as a tool. As new, appropriate training courses become available, we will evaluate them and send personnel as appropriate. In 2016, the City will be hosting a CESCL training and a Certified Stormwater Inspector training that a number of staff will attend to update their certifications and knowledge.

f. Recordkeeping: Permittees shall track and maintain records of the activities conducted to meet the requirements of this section.

The City maintains records of these activities.

4. **Controlling Runoff from New Development, Redevelopment and Construction Sites**

Each Permittee shall implement and enforce a program to reduce pollutants in stormwater runoff to a regulated small MS4 from new development, redevelopment and construction site activities. The program shall apply to private and public development, including roads.[16]

The minimum performance measures are:

a. Implement an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. Except for Permittees in Lewis and Cowlitz Counties and the City of Aberdeen, the ordinance or other enforceable mechanism to implement (i) through (iii), below, shall be adopted and effective no later than December 31, 2016. The local program adopted to meet the requirements of S5.C.4.a(i) through (iii), below shall apply to all applications[17] submitted on or after January 1, 2017 and shall apply to applications submitted prior to January 1, 2017, which have not started construction[18] by January 1, 2022[19].

[16] New Permittees shall meet the requirements of S5.C.4 no later than December 31, 2017, except where otherwise specified in this section.

[17] In this context, "application" means, at a minimum a complete project description, site plan, and, if applicable, SEPA checklist. Permittees may establish additional elements of a completed application.

[18] In this context "started construction" means the site work associated with, and directly related to the approved project has begun. For example: grading the project site to final grade or utility installation. Simply clearing the project site does not constitute the start of construction. Permittees may establish additional requirements related to the start of construction.

For Permittees in Lewis and Cowlitz Counties the ordinance or other enforceable mechanism to implement (i) through (iii), below, shall be adopted and effective no later than June 30, 2017. The local program adopted to meet the requirements of S5.C.4.a(i) through (iii), below shall apply to all applications submitted on or after July 1, 2017 and shall apply to applications submitted prior to July 1, 2017, which have not started construction by June 30, 2022.

For the City of Aberdeen the ordinance or other enforceable mechanism to implement (i) through (iii), below, shall be adopted and effective no later than June 30, 2018. The local program adopted to meet the requirements of S5.C.4.a(i) through (iii), below shall apply to all applications submitted on or after July 1, 2018 and shall apply to applications submitted prior to July 1, 2018, which have not started construction by June 30, 2023.

The ordinance or other enforceable mechanism shall include, at a minimum:

i. The Minimum Requirements, thresholds, and definitions in Appendix 1 or a program approved by Ecology under the 2013 NPDES Phase I Municipal Stormwater Permit, for new development, redevelopment, and construction sites. Adjustment and variance criteria equivalent to those in Appendix 1 shall be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of Ecology-approved basin plans or other similar water quality and quantity planning efforts. Such local requirements and thresholds shall provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1.

ii. The local requirements shall include the following requirements, limitations, and criteria that, when used to implement the minimum requirements in Appendix 1 (or program approved by Ecology under the 2013 Phase I Permit) will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy the State requirement under chapter 90.48 RCW to apply AKART prior to discharge:

    (a) Site planning requirements

    (b) BMP selection criteria

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[19] New Permittees shall meet the requirements of S5.C.4.a no later than December 31, 2017. The local program shall apply to all applications submitted on or after January 1, 2018 and shall apply to applications submitted prior to January 1, 2018, which have not started construction by January 1, 2023.

(c) BMP design criteria

(d) BMP infeasibility criteria

(e) LID competing needs criteria

(f) BMP limitations

Permittees shall document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the MEP, and satisfy State AKART requirements.

Permittees who choose to use the requirements, limitations, and criteria above in the *Stormwater Management Manual for Western Washington*, or a program approved by Ecology under the 2013 Phase I Permit, may cite this choice as their sole documentation to meet this requirement.

iii. The legal authority, through the approval process for new development and redevelopment, to inspect and enforce maintenance standards for private stormwater facilities approved under the provisions of this section that discharge to the Permittee's MS4.

The City intends to utilize the Stormwater Management Manual for Western Washington as our Manual, and to adopt a revised ordinance (original ordinance adopted in 1996) EMC 14.28 Surface and Storm Drainage by the December 31, 2016 deadline, which will comply with the minimum performance measures listed above. Until that time, we continue to implement our program utilizing the 2010 version of EMC 14.28 adopting the Minimum Standards, and the 2010 City of Everett Stormwater Management Manual.

b. The program shall include a permitting process with site plan review, inspection and enforcement capability to meet the standards listed in (i) through (iv) below, for both private and public projects, using qualified personnel (as defined in *Definitions and Acronyms*). At a minimum, this program shall be applied to all sites that meet the minimum thresholds adopted pursuant to S5.C.4.a.i, above.

i. Review of all stormwater site plans for proposed development activities.

ii. Inspect, prior to clearing and construction, all permitted development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Determining Construction Site Sediment Damage

Potential. As an alternative to evaluating each site according to Appendix 7, Permittees may choose to inspect all construction sites that meet the minimum thresholds adopted pursuant to S5.C.4.a.i, above.

iii. Inspect all permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.

iv. Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater facilities. Verify that a maintenance plan is completed and responsibility for maintenance is assigned for stormwater treatment and flow control BMPs/facilities. Enforce as necessary based on the inspection.

v. Compliance with the inspection requirements in (ii), (iii) and (iv) above, shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections.

vi. An enforcement strategy shall be implemented to respond to issues of non-compliance.

c. The program shall include provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to (b) above. Except for Permittees located in Lewis or Cowlitz Counties and the City of Aberdeen, these provisions shall be in place no later than December 31, 2016. [20] For Permittees in Lewis and Cowlitz Counties, the provisions shall be in place no later than June 30, 2017. For the City of Aberdeen, the provisions shall be in place no later than June 30, 2018. The provisions shall include:

i. Implementation of an ordinance or other enforceable mechanism that clearly identifies the party responsible for maintenance, requires inspection of facilities in accordance with the requirements in (ii) through (iv) below, and establishes enforcement procedures.

ii. Each Permittee shall establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 of Volume V of the *Stormwater Management Manual for Western Washington*. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard.

[20] New Permittees shall meet the requirements of S5.C.4.c no later than December 31, 2017.

The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facility's required condition at all times between inspections. Exceeding the maintenance standard between the period of inspections is not a permit violation.

iii. Annual inspections of all stormwater treatment and flow control BMPs/facilities that discharge to the MS4 and were permitted by the Permittee according to S5.C.4.b, including those permitted in accordance with requirements adopted pursuant to the 2007-2012 Ecology municipal stormwater permits, unless there are maintenance records to justify a different frequency.

Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.

iv. Inspections of all permanent stormwater treatment and flow control BMPs/facilities and catch basins in new residential developments every six months until 90% of the lots are constructed (or when construction is stopped and the site is fully stabilized) to identify maintenance needs and enforce compliance with maintenance standards as needed.

v. Compliance with the inspection requirements in (iii) and (iv) above shall be determined by the presence and records of an established inspection program designed to inspect all sites. Compliance during this permit term shall be determined by achieving at least 80% of scheduled inspections.

vi. Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:

- Within 1 year for typical maintenance of facilities, except catch basins.
- Within 6 months for catch basins.
- Within 2 years for maintenance that requires capital construction of less than $25,000.

Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary

permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control.

vii. The program shall include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained.

For many years prior to the 2007 permit, the City has inspected private sites with stormwater structures annually for compliance with maintenance standards, and will continue to do so in 2016 unless we alter the frequency based on the criteria noted above. The likely need to alter this practice would be the proliferation of inspection of on-site stormwater control/treatment facilities on privately-owned lots. We are finding that this kind of inspection takes significantly more time than facilities set aside in a separate tract or part of commercial/multi-family properties.

The City shall continue to perform the items listed above as required in the previous permit and continued in this permit, while making progress on altering regulations as they are reviewed in Planning (such as the Parking development regulations) to prepare for the new requirements taking effect after December 31, 2016. Some staff have already attended Ecology and WSC courses to prepare them for the changes relative to LID, and more will attend as time draws closer to implementation of the new regulations.

d. The program shall make available as applicable copies of the "Notice of Intent for Construction Activity" and copies of the "Notice of Intent for Industrial Activity" to representatives of proposed new development and redevelopment. Permittees shall continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology.[21]

In 2016 the City altered a webpage about stormwater runoff from construction sites to include a link to the online NOIs. When doing stormwater facility inspections, if the business appears to need an industrial permit, they are told to contact Ecology. We will continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology, as there is no distinction of those sites from others in our regulations. We reserve the

[21] New Permittees shall meet the requirements of S5.C.4.d beginning no later than August 1, 2013.

option of calling upon Ecology to assist in enforcement on difficult cases.

e. Each Permittee shall ensure that all staff whose primary job duties are implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.[22]

Personnel implementing the program receive on-the-job training from qualified personnel and classroom training as well. This is a very diverse group of people, so trainings and techniques for more technical aspects will vary. The various personnel have PEs, LID certificates, CESCL trainings, etc., depending on job needs. Personnel have been attending the courses on LID offered by Ecology and WSC and will continue to do so in 2016.

f. Low impact development code-related requirements.

i. No later than December 31, 2016,[23] Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs. For Permittees in Lewis and Cowlitz Counties, the deadline for this requirement is no later than June 30, 2017; for the City of Aberdeen, the deadline for this requirement is no later than June 30, 2018.

The intent of the revisions shall be to make LID the preferred and commonly-used approach to site development. The revisions shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations. Permittees shall conduct a similar review and revision process, and consider the range of issues, outlined in the following document: *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership, 2012).

ii. Except for Permittees in Lewis and Cowlitz Counties and the City of Aberdeen, each Permittee shall submit a summary of the results of the review and revision process in (i) above with the annual report due no

[22] New Permittees shall meet the requirements of S5.C.4.e no later than December 31, 2017.

[23] New Permittees shall meet the requirements of S5.C.4.f.i no later than December 31, 2017.

later than March 31, 2017[24]. Permittees in Lewis and Cowlitz Counties shall submit the summary with the annual report due no later than March 31, 2018. The City of Aberdeen shall submit the summary with the Fifth Year annual report. This summary shall include, at a minimum, a list of the participants (job title, brief job description, and department represented), the codes, rules, standards, and other enforceable documents reviewed, and the revisions made to those documents which incorporate and require LID principles and LID BMPs. The summary shall include existing requirements for LID principles and LID BMPs in development-related codes. The summary shall be organized as follows:

(a) Measures to minimize impervious surfaces;

(b) Measures to minimize loss of native vegetation; and

(c) Other measures to minimize stormwater runoff.

g. Watershed-scale stormwater planning

NOTE: The City of Everett was not included in the watershed chosen via petition by Snohomish County, so there will be no City response to any of the items in this section.

The objective of watershed-scale stormwater planning is to identify a stormwater management strategy or strategies that would result in hydrologic and water quality conditions that fully support "existing uses," and "designated uses," as those terms are defined in WAC 173-201A-020, throughout the stream system.

Each City or County Permittee[25] that has all or part of its coverage area in a watershed selected by a Phase I county for watershed-scale stormwater planning under condition S5.C.5.c of the *Phase I Municipal Stormwater Permit* must fully participate in the watershed-scale stormwater planning process as described in S5.C.4.g, below. Permittees may choose to participate in a coordinated scope of work and schedule with one or more of the Permittees within the selected watershed, or conduct their scope of work independently.

i. No later than August 13, 2015, each Permittee within a selected watershed must submit to Ecology documentation of its approach to coordinate with other Permittees within the watershed, including:

[24] New Permittees shall meet the S5.C.4.f.ii reporting requirement in the annual report covering calendar year 2017 and due no later than March 31, 2018.

[25] This section applies to the Phase II Permittees within King County's selected watershed: the cities of Redmond and Woodinville. Bothell has minimal acreage in the Snohomish County watershed and is not required to participate.

(a) A list of the municipal stormwater Permittees with whom the Permittee will undertake watershed-scale planning under a common scope of work; and a description of the coordination and dispute resolution procedures agreed to by all of the Permittees operating under the common scope of work; and

(b) A description of planned coordination and dispute resolution procedures for providing and receiving feedback from Permittees operating under different scopes of work within the same watershed, including procedures to:

1) Review, provide comment, and revise methods and assumptions to meet S5.C.4.g.ii (a) through (d);

2) Review, provide comment, and revise present- and future-condition B-IBI scores, pollutant concentrations, temperature and hydrologic metrics used for calibrating the model;

3) Share the results of the modeling performed by the Permittee with all other Permittees in the watershed;

4) Adjust the Permittee's proposed changes to development-related codes, rules, standards, plans, and potential future structural stormwater control projects in response to feedback so that the planning objectives, as described in S5.C.4.g above, are projected to be met throughout the watershed.

(c) It is not a permit violation if other entities, over whose actions the Permittee has limited or no control, refuse to participate in the coordination plan described in S5.C.4.g.i.

ii. No later than November 4, 2015 the Permittee must submit a scope of work and a schedule to Ecology for the complete watershed-scale stormwater planning process. The scope of work and schedule are subject to Ecology's review and approval. If Ecology takes longer than 90 days to provide a written response, the required deadline for submitting a final watershed-scale stormwater plan to Ecology will be automatically extended by the number of days Ecology exceeds 90 days, but no later than July 30, 2018.

The scope of work and schedule must apply to the geographic extent of the jurisdictions of the Permittees listed under S5.C.4.g.i (a) above and, at a minimum, describe:

(a) An assessment of existing hydrologic, biologic, and water quality conditions within the selected watershed, and an assessment of the current status of the aquatic community. This assessment can be based on existing data where such data are available. Where such data are not available, or are not

sufficient, the scope of work and schedule must include the collection of such data.

The existing conditions assessment must, at a minimum, include the following:

1) Water quality conditions as established through sampling during base flows and storm flows for, at a minimum, the following chemical parameters: dissolved copper, dissolved zinc, temperature, and fecal coliform. Permittees must identify or collect data from locations upgradient and downgradient of stream sections influenced by MS4 discharges.

2) Continuous flow monitoring of the stream to provide the data necessary to calibrate a continuous runoff model to the selected watershed. Permittees must identify or collect flow monitoring data from locations upgradient and downgradient of stream sections influenced by MS4 discharges.

3) Macroinvertebrate data for the purpose of estimating current Benthic Index of Biotic Integrity (B-IBI) scores and comparing them with the scores predicted by the existing values of the hydrologic metrics in S5.C.4.g.ii (d).

4) The status of the aquatic community, including the presence and distribution of salmonid uses, using data from existing sources.

(b) Efforts to compile and/or generate maps of the selected watershed to identify the existing distribution and totals of general soil types, vegetative land cover, impervious land covers, and regulated and other MS4s. Maps must be sufficient to allow construction of a rainfall/runoff model representation of the watershed. Maps must also identify areas within the watershed appropriate for special attention in regard to hydrologic and water quality impacts. For example: headwater wetlands and critical aquifer recharge areas.

(c) How the Permittee will use the existing conditions assessment from S5.C.4.g.ii (a) and the maps described in S5.C.4.g.ii (b) to calibrate a continuous runoff model to reflect the existing hydrologic, water quality, and biologic (as represented by B-IBI score) conditions.

(d) How the Permittee will use the model calibrated in S5.C.4.g.ii (c) to estimate hydrologic changes from the historic condition; and to predict the future hydrologic, biologic, and water quality

conditions at full build-out under existing or proposed comprehensive land use management plan(s) for the watershed. Future biologic conditions must be estimated by using a correlation of hydrologic metrics with B-IBI scores for *Puget Sound Lowland Streams*[26], or other similar correlation if approved by Ecology. Future water quality conditions must be described through estimation of concentrations of, at a minimum, dissolved copper, dissolved zinc, temperature, and fecal coliform.

(e) How, if the estimation in S5.C.4.g.ii (d) predicts water quality standards will not be met, the Permittee will use the calibrated watershed model to evaluate stormwater management strategies to meet the standards. The same hydrologic metrics and correlated B-IBI scores, and water quality parameters used in S5.C.4.g.ii (d) must be used to evaluate the effectiveness of strategies.

1) Stormwater management strategies to be evaluated for all jurisdictions in the watershed must include:

- Changes to development-related codes, rules, standards, and plans.
- Potential future structural stormwater control projects.

2) Stormwater management strategies evaluated may also include:

- Basin-specific stormwater control requirements for new development and redevelopment as allowed by Section 7 of Appendix 1.
- Strategies to encourage redevelopment and infill, and an assessment of options for efficient, effective runoff controls for redevelopment projects, such as regional facilities, in lieu of individual site requirements.

(f) How the permittee will create an implementation plan and schedule that includes: potential future actions to implement the identified stormwater management strategies, responsible parties, estimated costs, and potential funding mechanisms.

(g) A public review and comment process that, at a minimum, focuses on the draft watershed-scale stormwater plan. The public

[26] DeGasperi, C.L., Berge, H. B., Whiting, K. R., Burkey, J. J., Cassin, J. L. and Fuerstenberg, R. R. (2009), Linking Hydrologic Alteration to Biological Impairment in Urbanizing Streams of the Puget Lowland, Washington, USA. JAWRA Journal of the American Water Resources Association, 45: 512-533. Doi: 10.1111/j.1752-1688.2009.00306.x

review must allow for public comment from all governmental entities with jurisdiction within the watershed.

iii. The watershed-scale stormwater planning process, as documented in the scope of work and schedule, may include an evaluation of strategies to preserve or improve other factors that influence maintenance of the existing and designated uses of the stream. Examples include: channel restoration, in-stream culvert replacement, quality of the riparian zone, gravel disturbance regime, and presence and distribution of large woody debris.

iv. Each Permittee (or group of Permittees operating under a single scope of work, as described above) must submit a final watershed-scale stormwater plan to Ecology no later April 4, 2018. The plan must summarize results of the modeling and planning process, describe results of the evaluation of strategies under S5.C.4.g.ii (e), and include the implementation plan and schedule developed pursuant to S5.C.4.g.ii (f).

5. **Municipal Operations and Maintenance**

Each Permittee shall implement an operations and maintenance (O&M) program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.[27]

The City is implementing an operations and maintenance (O&M) program for streets, water, sewers and storm drainage based on Element 10 of the Regional Road Maintenance Program, which was developed for ESA compliance, and approved by NOAA Fisheries. Element 10 of the program includes a selection and implementation process for BMPs, and a training program for use of the BMPs. The City's O&M program was modified to incorporate the IDDE component, and the inspection, standards, and maintenance checklists from Volume V of the Stormwater Management Manual for Western Washington to meet permit requirements. We will continue working with other work groups within the City to implement the appropriate practices to comply with the permit, and will continue to offer documents and guidance.

The minimum performance measures are:

a. Each Permittee shall implement maintenance standards that are as protective, or more protective, of facility function than those specified in Chapter 4 of Volume V of the *Stormwater Management Manual for Western Washington*.

[27] New Permittees shall develop and implement the requirements of S5.C.5 no later than December 31, 2017 except where otherwise noted in this section.

For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard. Except for Permittees located in Lewis and Cowlitz Counties and the City of Aberdeen, no later than December 31, 2016, Permittees shall update their maintenance standards as necessary to meet the requirements of this section.[28] For Permittees in Lewis and Cowlitz Counties, this requirement shall apply no later than June 30, 2017; for the City of Aberdeen this requirement shall apply no later than June 30, 2018.

Maintenance standards have been developed for those specified in the permit. Maintenance standards will be reviewed and updated as needed no later than December 31, 2016.

i. The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facility's required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a permit violation.

ii. Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedance of the maintenance standard, maintenance shall be performed:

- Within 1 year for typical maintenance of facilities, except catch basins.
- Within 6 months for catch basins.
- Within 2 years for maintenance that requires capital construction of less than $25,000.

Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedance of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control.

Maintenance standards consistent with the 2005 Ecology Manual are in place, and include tracking and documentation procedures. We continue to work with other City departments so that their practices are consistent with Ecology Manual. In 2016 the City will

[28] New Permittees shall adopt the updated maintenance standards in Chapter 4 of Volume V of the *Stormwater Management Manual for Western Washington* or an Ecology-approved program under the 2013 Phase I Permit no later than December 31, 2017.

evaluate standards and checklist to see if they are consistent with the 2012/2014 Ecology Manual.

b. Annual inspection of all municipally owned or operated permanent stormwater treatment and flow control BMPs/facilities, and taking appropriate maintenance actions in accordance with the adopted maintenance standards.[29]

Standards and checklists consistent with the 2005 Ecology Manual are being used for the annual inspections.

Permittees may reduce the inspection frequency based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.

c. Spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities after major storm events (24 hour storm event with a 10 year or greater recurrence interval). If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control BMPs/facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections.

Maintenance standards for spot checks have been developed and incorporated into the program. We have selected the sites that will be assessed after major storm events.

d. Except for the City of Aberdeen, inspection of all catch basins and inlets owned or operated by the Permittee at least once no later than August 1, 2017 and every two years thereafter. [30] For the City of Aberdeen, the deadline for this requirement shall be no later than June 30, 2018. Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the *Stormwater Management Manual for Western Washington*. Decant water shall be disposed of in accordance with Appendix 6 *Street Waste Disposal*.

The following alternatives to the standard approach of inspecting all catch

[29] New Permittees shall begin annual inspections of municipally owned or operated stormwater treatment and flow control facilities/BMPs no later than December 31, 2017.

[30] New Permittees shall inspect and, if needed, clean all catch basins and inlets owned or operated by the Permittee in accordance with the requirements of S5.C.5.d once during the permit term, to be completed no later than February 2, 2018.

basins once no later than August 1, 2017 and every two years thereafter (except no later than June 30, 2018 and every two years thereafter for the City of Aberdeen) may be applied to all or portions of the system:

i. The catch basin inspection schedule of every two years may be changed as appropriate to meet the maintenance standards based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records for catch basins, the Permittee may substitute written statements to document a specific, less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experiences and shall be certified in accordance with G19 Certification and Signature.

ii. Inspections at least once by August 1, 2017 and every two years thereafter may be conducted on a "circuit basis" whereby 25% of catch basins and inlets within each circuit are inspected to identify maintenance needs. Include an inspection of the catch basin immediately upstream of any system outfall or discharge point, if applicable. Clean all catch basins within a given circuit for which the inspection indicates cleaning is needed to comply with maintenance standards established under S5.C.5.a, above.

iii. The Permittee may clean all pipes, ditches, catch basins, and inlets within a circuit once during the permit term. Circuits selected for this alternative must drain to a single point.

Inspecting and cleaning catch basins is done consistent with the maintenance standard in the Stormwater Management Manual for Western Washington. We intend to inspect all known City catch basins between August 1, 2013 and August 1, 2017.

e. Compliance with the inspection requirements in b, c, and d above shall be determined by the presence of an established inspection program designed to inspect all sites and achieving at least 95% of inspections.

f. Implement practices, policies and procedures to reduce stormwater impacts associated with runoff from all lands owned or maintained by the Permittee, and road maintenance activities under the functional control of the Permittee. Lands owned or maintained by the Permittee include, but are not limited to, streets, parking lots, roads, highways, buildings, parks, open space, road right-of-ways, maintenance yards, and stormwater treatment and flow control BMPs/facilities. The following activities shall be addressed:

- Pipe cleaning
- Cleaning of culverts that convey stormwater in ditch systems
- Ditch maintenance
- Street cleaning

- Road repair and resurfacing, including pavement grinding
- Snow and ice control
- Utility installation
- Pavement striping maintenance
- Maintaining roadside areas, including vegetation management
- Dust control
- Application of fertilizers, pesticides, and herbicides according to the instructions for their use, including reducing nutrients and pesticides using alternatives that minimize environmental impacts
- Sediment and erosion control
- Landscape maintenance and vegetation disposal
- Trash and pet waste management
- Building exterior cleaning and maintenance

The City's current O&M program for streets, water, sewers and storm drainage is based on Element 10 of the Regional Road Maintenance Program, which was developed for ESA compliance, and approved by NOAA Fisheries. Element 10 of the program includes a selection and implementation process for BMPs, and a training program for use of the BMPs. The City's O&M program has been modified to incorporate the IDDE component, and the inspection, standards, and maintenance checklists from Volume V of the Stormwater Management Manual for Western Washington , and met permit requirements. Other work groups within the City have included the appropriate practices in their procedures to comply with the permit.

g. Implement an ongoing training program for employees of the Permittee whose primary construction, operations or maintenance job functions may impact stormwater quality. The training program shall address the importance of protecting water quality, operation and maintenance standards, inspection procedures, selecting appropriate BMPs, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of training provided and the staff trained.

Training of the field crews and maintenance staff for Streets, Water,

Sewer and Storm Drainage, and Parks using the Regional Road Maintenance track 2, 3, 3F, and 3B to address the importance of protecting water quality, operation and maintenance, selecting BMPs, and ways to perform their job activities to prevent or minimize impacts to water quality have been completed for the field crews. Follow-up training in 2016, shall be provided and as needed for new employees, or to update procedures.

h. Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under the *General NPDES Permit for Stormwater Discharges Associated with Industrial Activities* or another NPDES permit that authorizes stormwater discharges associated with the activity. A schedule for implementation of structural BMPs shall be included in the SWPPP. Generic SWPPPs that can be applied at multiple sites may be used to comply with this requirement. The SWPPP shall include periodic visual observation of discharges from the facility to evaluate the effectiveness of the BMP.

In 2016 SWPPP's for these sites will be reviewed and updated as needed.

i. Maintain records of inspections and maintenance or repair activities conducted by the Permittee.

The City will continue to track activities following our current recordkeeping practices for inspections, maintenance and repair activities.

S6. STORMWATER MANAGEMENT PROGRAM FOR SECONDARY PERMITTEES

NOTE: The City of Everett is not a Secondary Permittee, and currently has no Secondary or Co-permittees, so will not note any actions under this section.

A. This section applies to all Secondary Permittees and all New Secondary Permittees, whether coverage under this Permit is obtained individually or as a Co-Permittee with a city, town, county or another Secondary Permittee.

New Secondary Permittees subject to this Permit shall fully meet the requirements of this section as modified in footnotes in S6.D below, or as established as a condition of coverage by Ecology.

1. To the extent allowable under state, federal or local law, all components are mandatory for each Secondary Permittee covered under this Permit, whether covered as an individual Permittee or as a Co-Permittee.

2. Each Secondary Permittee shall develop and implement a stormwater management program (SWMP). A SWMP is a set of actions and activities comprising the components listed in S6 and any additional actions necessary to meet the requirements of applicable TMDLs pursuant to S7 Compliance with TMDL Requirements, and S8 Monitoring and Assessment. The SWMP shall be designed to reduce the discharge of pollutants from regulated small MS4s to the MEP and protect water quality.

3. Unless an alternate implementation schedule is established by Ecology as a condition of permit coverage, the SWMP shall be developed and implemented in accordance with the schedules contained in this section and shall be fully developed and implemented no later than four and one-half years from the initial permit coverage date. Secondary Permittees that are already implementing some or all of the required SWMP components shall continue implementation of those components.

4. Secondary Permittees may implement parts of their SWMP in accordance with the schedule for cities, towns, and counties in S5, provided they have signed a memorandum of understanding or other agreement to jointly implement the activity or activities with one or more jurisdictions listed in S1.D.2.a or S1.D.2.b, and submitted a copy of the agreement to Ecology.

5. Each Secondary Permittee shall prepare written documentation of the SWMP, called the SWMP Plan. The SWMP Plan shall include a description of program activities for the upcoming calendar year.

B. Coordination

Secondary Permittees shall coordinate stormwater-related policies, programs and projects within a watershed and interconnected MS4s. Where relevant and appropriate, the SWMP shall coordinate among departments of the Secondary Permittee to ensure compliance with the terms of this Permit.

C. Legal Authority

To the extent allowable under state law and federal law, each Secondary Permittee shall be able to demonstrate that they can operate pursuant to legal authority which authorizes or enables the Secondary Permittee to control discharges to and from MS4s owned or operated by the Secondary Permittee.

This legal authority may be a combination of statutes, ordinances, permits, contracts, orders, interagency agreements, or similar instruments.

D. Stormwater Management Program for Secondary Permittees

The SWMP for Secondary Permittees shall include the following components:

1. **Public Education and Outreach**

   Each Secondary Permittee shall implement the following stormwater education strategies:

   a. Storm drain inlets owned or operated by the Secondary Permittee that are located in maintenance yards, in parking lots, along sidewalks, and at pedestrian access points shall be clearly labeled with a message similar to "Dump no waste – Drains to water body".[31]

      As identified during visual inspection and regular maintenance of storm drain inlets per the requirements of S6.D.3.d and S6.D.6.a.i below, or as otherwise reported to the Secondary Permittee, any inlet having a label that is no longer clearly visible and/or easily readable shall be re-labeled within 90 days.

   b. Each year beginning no later than three years from the initial date of permit coverage, public ports, colleges, and universities shall distribute educational information to tenants and residents on the impact of stormwater discharges on receiving waters, and steps that can be taken to reduce pollutants in stormwater runoff. Distribution may be by hard copy or electronic means. Appropriate topics may include:

      i. How stormwater runoff affects local water bodies.

      ii. Proper use and application of pesticides and fertilizers.

      iii. Benefits of using well-adapted vegetation.

      iv. Alternative equipment washing practices, including cars and trucks, that minimize pollutants in stormwater.

      v. Benefits of proper vehicle maintenance and alternative transportation choices; proper handling and disposal of vehicle wastes, including the location of hazardous waste collection facilities in the area.

      vi. Hazards associated with illicit connections and illicit discharges.

      vii. Benefits of litter control of pet waste.

2. **Public Involvement and Participation**

   Each year, no later than May 31, each Secondary Permittee shall:

   a. Make the annual report available on the Permittee's website.

[31] New Secondary Permittees shall label all inlets as described in S6.D.1.a no later than four years from the initial date of permit coverage.

b. Make available on the Permittee's website the latest updated version of the SWMP Plan.

c. A Secondary Permittee that does not maintain a website may submit the updated SWMP Plan and annual report in electronic format to Ecology for posting on Ecology's website.

3. **Illicit Discharge Detection and Elimination**

Each Secondary Permittee shall:

a. From the initial date of permit coverage, comply with all relevant ordinances, rules, and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern non-stormwater discharges.

b. Implement appropriate policies prohibiting illicit discharges,[32] and an enforcement plan to ensure compliance with illicit discharge policies.[33] These policies shall address, at a minimum: illicit connections, non-stormwater discharges, including spills of hazardous materials, and improper disposal of pet waste and litter.

i. Allowable discharges: The policies do not need to prohibit the following categories of non-stormwater discharges:

- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(b)(20))
- Uncontaminated pumped ground water
- Foundation drains.
- Air conditioning condensation
- Irrigation water from agricultural sources that is commingled with urban stormwater
- Springs
- Uncontaminated water from crawl space pumps

[32] New Secondary Permittees shall develop and implement appropriate policies prohibiting illicit discharges, and identify possible enforcement mechanisms as described in S6.D.3.b no later than one year from the initial date of permit coverage.

[33] New Secondary Permittees shall develop and implement an enforcement plan as described in S6.D.3.b no later than 18 months from the initial date of permit coverage.

- Footing drains
- Flows from riparian habitats and wetlands
- Discharges from emergency fire fighting activities in accordance with S2 Authorized Discharges
- Non-stormwater discharges authorized by another NPDES or state waste discharge permit

ii. Conditionally allowable discharges: The policies may allow the following categories of non-stormwater discharges only if the stated conditions are met and such discharges are allowed by local codes:

- Discharges from potable water sources, including but not limited to water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4.
- Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities and water conservation efforts conducted by the Secondary Permittee and/or the local jurisdiction.
- Dechlorinated swimming pool, spa and hot tub discharges. The discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4. Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.
- Street and sidewalk wash water, water used to control dust, and routine external building washdown that does not use detergents. The Secondary Permittee shall reduce these discharges through, at a minimum, public education activities and/or water conservation efforts conducted by the Secondary Permittee and/or the local jurisdiction. To avoid washing pollutants into the MS4, the Secondary Permittee shall minimize the amount of street wash and dust control water used.

- Other non-stormwater discharges shall be in compliance with the requirements of a pollution prevention plan reviewed by the Permittee which addresses control of such discharges.

iii. The Secondary Permittee shall address any category of discharges in (i) or (ii) above if the discharge is identified as a significant source of pollutants to waters of the State.

c. Maintain a storm sewer system map showing the locations of all known MS4 outfalls and discharge points, labeling the receiving waters (other than ground water) and delineating the areas contributing runoff to each outfall and discharge point. Make the map (or completed portions of the map) available on request to Ecology and to the extent appropriate, to other Permittees. The preferred format for mapping is an electronic format with fully described mapping standards. An example description is provided on Ecology's website.[34]

d. Conduct field inspections and visually inspect for illicit discharges at all known MS4 outfalls and discharge points. Visually inspect at least one third (on average) of all known outfalls and discharge points each year beginning no later than two years from the initial date of permit coverage. Implement procedures to identify and remove any illicit discharges. Keep records of inspections and follow-up activities.

e. Implement a spill response plan that includes coordination with a qualified spill responder.[35]

f. No later than two years from initial date of permit coverage, provide staff training or coordinate with existing training efforts to educate staff on proper BMPs for preventing illicit discharges, including spills. Train all Secondary Permittee staff who, as part of their normal job responsibilities, have a role in preventing such illicit discharges.

4. **Construction Site Stormwater Runoff Control**

From the initial date of permit coverage, each Secondary Permittee shall:

a. Comply with all relevant ordinances, rules, and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern construction phase stormwater pollution prevention measures.

[34] New Secondary Permittees shall meet the requirements of S6.D.3.c no later than four and one-half years from the initial date of permit coverage.

[35] New Secondary Permittees shall develop and implement a spill response plan as described in S6.D.3.e no later than four and one-half years from the initial date of permit coverage.

b. Ensure that all construction projects under the functional control of the Secondary Permittee which require a construction stormwater permit obtain coverage under the *NPDES General Permit for Stormwater Discharges Associated with Construction Activitie*s or an individual NPDES permit prior to discharging construction related stormwater.

c. Coordinate with the local jurisdiction regarding projects owned or operated by other entities which discharge into the Secondary Permittee's MS4, to assist the local jurisdiction with achieving compliance with all relevant ordinances, rules, and regulations of the local jurisdiction(s).

d. Provide training or coordinate with existing training efforts to educate relevant staff in erosion and sediment control BMPs and requirements, or hire trained contractors to perform the work.

e. Coordinate as requested with Ecology or the local jurisdiction to provide access for inspection of construction sites or other land disturbances which are under the functional control of the Secondary Permittee during land disturbing activities and/or construction period.

5. **Post-Construction Stormwater Management for New Development and Redevelopment**

From the initial date of permit coverage, each Secondary Permittee shall:

a. Comply with all relevant ordinances, rules and regulations of the local jurisdiction(s) in which the Secondary Permittee is located that govern post-construction stormwater pollution prevention measures.

b. Coordinate with the local jurisdiction regarding projects owned or operated by other entities which discharge into the Secondary Permittee's MS4, to assist the local jurisdiction with achieving compliance with all relevant ordinances, rules and regulations of the local jurisdiction(s).

6. **Pollution Prevention and Good Housekeeping for Municipal Operations**

Each Secondary Permittee shall:

a. Implement a municipal operation and maintenance (O&M) plan to minimize stormwater pollution from activities conducted by the Secondary Permittee. The O&M Plan shall include appropriate pollution prevention and good housekeeping procedures for all of the following operations, activities, and/or types of facilities that are present within the Secondary Permittee's boundaries and under the functional control of the Secondary Permittee.[36]

[36] New Secondary Permittees shall develop and implement the operation and maintenance plan described in S6.D.6.a no later than three years from initial date of permit coverage.

i. **Stormwater collection and conveyance systems**, including catch basins, stormwater pipes, open channels, culverts, and stormwater treatment and flow control BMPs/facilities. The O&M Plan shall address, at a minimum: scheduled inspections and maintenance activities, including cleaning and proper disposal of waste removed from the system. Secondary Permittees shall properly maintain stormwater collection and conveyance systems owned or operated by the Secondary Permittee and regularly inspect and maintain all stormwater facilities to ensure facility function.

Secondary Permittees shall establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 Volume V of the *Stormwater Management Manual for Western Washington*. Secondary Permittees shall review their maintenance standards to ensure they are consistent with the requirements of this section.

Secondary Permittees shall conduct spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities following major storm events (24 hour storm event with a 10 year or greater recurrence interval).

ii. **Roads, highways, and parking lots**. The O&M Plan shall address, but is not limited to: deicing, anti-icing, and snow removal practices; snow disposal areas; material (e.g., salt, sand, or other chemical) storage areas; all-season BMPs to reduce road and parking lot debris and other pollutants from entering the MS4.

iii. **Vehicle fleets**. The O&M Plan shall address, but is not limited to: storage, washing, and maintenance of Secondary Permittee vehicle fleets; and fueling facilities. Secondary Permittees shall conduct all vehicle and equipment washing and maintenance in a self-contained covered building or in designated wash and/or maintenance areas.

iv. **External building maintenance**. The O&M Plan shall address, building exterior cleaning and maintenance including cleaning, washing, painting; and maintenance and management of dumpsters; and other maintenance activities.

v. **Parks and open space**. The O&M Plan shall address, but is not limited to: proper application of fertilizer, pesticides, and herbicides; sediment and erosion control; BMPs for landscape maintenance and vegetation disposal; and trash and pet waste management.

vi. **Material storage facilities and heavy equipment maintenance or storage yards**. Secondary Permittees shall develop and implement a Stormwater Pollution Prevention Plan to protect water quality at each of these facilities owned or operated by the Secondary Permittee and

not covered under the *General NPDES Permit for Stormwater Discharges Associated with Industrial Activities* or under another NPDES permit that authorizes stormwater discharges associated with the activity.

vii. **Other facilities that would reasonably be expected to discharge contaminated runoff**. The O&M Plan shall address proper stormwater pollution prevention practices for each facility.

b. From the initial date of permit coverage, Secondary Permittees shall also have permit coverage for all facilities operated by the Secondary Permittee that are required to be covered under the *General NPDES Permit for Stormwater Discharges Associated with Industrial Activities* or another NPDES permit that authorizes discharges associated with the activity.

c. The O&M Plan shall include sufficient documentation and records as necessary to demonstrate compliance with the O&M Plan requirements in S6.D.6.a.(i) through (vii) above.

d. No later than three years from the initial date of permit coverage, Secondary Permittees shall implement a program designed to train all employees whose primary construction, operations, or maintenance job functions may impact stormwater quality. The training shall address:

i. The importance of protecting water quality.

ii. The requirements of this Permit.

iii. Operation and maintenance requirements.

iv. Inspection procedures.

v. Ways to perform their job activities to prevent or minimize impacts to water quality.

vi. Procedures for reporting water quality concerns, including potential illicit discharges (including spills).

S7. COMPLIANCE WITH TOTAL MAXIMUM DAILY LOAD REQUIREMENTS

The following requirements apply if an applicable TMDL is approved for stormwater discharges from MS4s owned or operated by the Permittee. Applicable TMDLs are TMDLs which have been approved by EPA on or before the issuance date of this Permit or prior to the date that Ecology issues coverage under this permit, whichever is later.

A. For applicable TMDLs listed in Appendix 2, affected Permittees shall comply with the specific requirements identified in Appendix 2. Each Permittee shall keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology. Each annual report shall include a summary

of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s).

TMDL activities are included in the Annual Report as required.

B. For applicable TMDLs not listed in Appendix 2, compliance with this Permit shall constitute compliance with those TMDLs.

C. For TMDLs that are approved by EPA after this Permit is issued, Ecology may establish TMDL related permit requirements through future permit modification if Ecology determines implementation of actions, monitoring or reporting necessary to demonstrate reasonable further progress toward achieving TMDL waste load allocations, and other targets, are not occurring and shall be implemented during the term of this Permit or when this Permit is reissued. Permittees are encouraged to participate in development of TMDLs within their jurisdiction and to begin implementation.

S8. MONITORING AND ASSESSMENT

A. All Permittees including Secondary Permittees shall provide, in each annual report, a description of any stormwater monitoring or stormwater-related studies conducted by the Permittee during the reporting period. If other stormwater monitoring or stormwater-related studies were conducted on behalf of the Permittee during the reporting period, or if stormwater-related investigations conducted by other entities were reported to the Permittee during the reporting period, a brief description of the type of information gathered or received shall be included in the annual report.

Permittees are <u>not</u> required to provide descriptions of any monitoring, studies, or analyses conducted as part of the Regional Stormwater Monitoring Program (RSMP) in annual reports. If a Permittee conducts independent monitoring in accordance with requirements in S8.B or S8.C below, annual reporting of such monitoring must follow the requirements specified in those sections.

The City does not intend to conduct any stormwater monitoring or stormwater-related studies in 2016. The City devoted considerable staff time to the effort to develop the Regional Stormwater Monitoring Program, and has chosen the pay-in option for all three portions of the monitoring in the RSMP.

B. Status and trends monitoring. By December 1, 2013, each city and county Permittee listed in S1.D.2.a(i) and S1.D.2.a(ii) located in Clallam, Island, King, Kitsap, Pierce, Skagit, Snohomish, Thurston, or Whatcom County shall notify Ecology in writing which of the following two options for status and trends monitoring the Permittee chooses to carry out during this permit cycle. Either option will fully satisfy the Permittee's obligations under this section (S8.B). Each Permittee shall select a single option for the duration of this permit term.

1. **Status and Trends Monitoring Option #1**: Each Permittee that chooses this option shall pay into a collective fund to implement RSMP small streams and

marine nearshore status and trends monitoring in Puget Sound. The payments into the collective fund are due to Ecology annually beginning August 15, 2014. The payment amounts are (Permittees are listed alphabetically, by county):

Permittee	Annual payment amount	Permittee	Annual payment amount
Clallam Co.	N/A	Pierce Co.	N/A
Port Angeles	$4,732	Bonney Lake	$4,075
Island Co.	N/A	Buckley	$1,129
Oak Harbor	$5,719	DuPont	$1,936
King Co.	N/A	Edgewood	$2,350
Algona	$678	Fife	$2,005
Auburn	$16,914	Fircrest	$1,549
Bellevue	$30,009	Gig Harbor	$1,836
Black Diamond	$1,023	Lakewood	$14,367
Bothell	$8,163	Milton	$1,597
Burien	$11,238	Orting	$1,525
Clyde Hill	$695	Puyallup	$9,498
Covington	$4,307	Steilacoom	$1,538
Des Moines	$7,152	Sumner	$2,217
Duvall	$1,463	University Place	$7,704
Enumclaw	$2,806	Skagit Co.	$1,257
Federal Way	$21,673	Burlington	$2,194
Issaquah	$6,632	Anacortes	$4,102
Kenmore	$5,042	Mount Vernon	$7,574
Kent	$27,441	Sedro Woolley	$2,452
Kirkland	$12,116	Snohomish Co.	N/A
Lake Forest Park	$3,135	Arlington	$4,219
Maple Valley	$5,648	Brier	$1,585
Medina	$728	Edmonds	$9,987
Mercer Island	$5,589	Everett	$25,419
Newcastle	$2,431	Granite Falls	$824
Normandy Park	$1,597	Lake Stevens	$6,512
Pacific	$1,540	Lynnwood	$8,829
Redmond	$13,143	Marysville	$14,172

Renton	$21,055	Mill Creek	$4,566
Sammamish	$10,028	Monroe	$4,073
SeaTac	$6,322	Mountlake Terrace	$5,118
Shoreline	$13,327	Mukilteo	$4,920
Tukwila	$4,444	Snohomish	$2,276
Woodinville	$2,771	Thurston Co.	$12,841
Kitsap Co.	$17,133	Lacey	$9,799
Bainbridge Island	$5,709	Olympia	$11,110
Bremerton	$8,837	Tumwater	$4,095
Port Orchard	$2,664	Whatcom Co.	$3,714
Poulsbo	$2,187	Bellingham	$18,936
		Ferndale	$2,737

Or

2. **Status and Trends Monitoring Option #2**: Each Permittee that chooses this option shall conduct status and trends monitoring as follows:

    a. Beginning no later than October 31, 2014, conduct wadeable stream water quality, benthos, habitat, and sediment chemistry monitoring according to the Ecology-approved Quality Assurance Project Plan (QAPP) for RSMP Small Streams Status and Trends Monitoring.

        i. Permittees with population less than 10,000 in the permit coverage area shall conduct this monitoring at the first two qualified monitoring locations (as listed sequentially among the potential monitoring locations defined in the RSMP QAPP) that are located within the jurisdiction's boundaries. Counties shall monitor the first location inside UGA boundaries and the first location outside UGA boundaries.

        ii. Permittees with population equal to or greater than 10,000 and fewer than 50,000 in the permit coverage area shall conduct this monitoring at the first four qualified monitoring locations (as listed sequentially among the potential monitoring locations defined in the RSMP QAPP) that are located within the jurisdiction's boundaries. Counties shall monitor the first two locations inside UGA boundaries and the first two locations outside UGA boundaries.

        iii. Permittees with population equal to or greater than 50,000 in the permit coverage area shall conduct this monitoring at the first eight qualified monitoring locations (as listed sequentially among the potential monitoring locations defined in the RSMP QAPP) that are located within the jurisdiction's boundaries. Counties shall monitor the first four locations inside UGA boundaries and the first four locations

outside UGA boundaries.

Permittees with population equal to or greater than 50,000 in the permit coverage area and located entirely inland (*i.e.*, having no Puget Sound shoreline boundary) shall conduct this monitoring at an additional four monitoring locations (as listed sequentially among the potential monitoring locations defined in the RSMP QAPP), for a total of 12 monitoring locations.

If fewer than the total required number (8 or 12) of monitoring locations located in the Permittees' coverage area meet the criteria for sampling defined in the RSMP QAPP, then the Permittee shall conduct this monitoring at all of the monitoring locations that meet the criteria.

And

b. Beginning no later than October 1, 2015, Permittees with Puget Sound shoreline shall conduct sediment chemistry, mussel, and bacteria monitoring according to the Ecology-approved QAPPs for RSMP Marine Nearshore Status and Trends Monitoring.

   i. Permittees with population less than 10,000 shall conduct this monitoring at the first two qualified monitoring locations each, for sediment and for mussels and bacteria (as listed sequentially among the potential monitoring locations defined in the RSMP QAPPs), that are located adjacent to the jurisdiction's Puget Sound shoreline boundary.

   ii. Permittees with population equal to or greater than 10,000 and fewer than 50,000 in the permit coverage area shall conduct this monitoring at the first four qualified monitoring locations each, for sediment and for mussels and bacteria (as listed sequentially among the potential monitoring locations defined in the RSMP QAPPs), that are located adjacent to the jurisdiction's Puget Sound shoreline boundary.

   iii. Permittees with population equal to or greater than 50,000 in the permit coverage area shall conduct this monitoring at the first six qualified monitoring locations each, for sediment and for mussels and bacteria (as listed sequentially among the potential monitoring locations defined in the RSMP QAPPs), that are located adjacent to the jurisdiction's Puget Sound shoreline boundary.

And

c. Data and analyses shall be reported annually in accordance with the Ecology-approved QAPPs.

C. Stormwater management program effectiveness studies. By December 1, 2013, each city and county Permittee listed in S1.D.2.a(i) and S1.D.2.a(ii) shall notify Ecology in writing which of the following two options for effectiveness studies the Permittee chooses to carry out during this permit cycle. Either option will fully satisfy the Permittee's obligations under this section (S8.C). Each Permittee shall select a single option for the duration of this permit term.

1. **Effectiveness Studies Option #1**: Each Permittee that chooses this option shall pay into a collective fund to implement RSMP effectiveness studies. The payments into the collective fund are due to Ecology annually beginning August 15, 2014. The payment amounts are (Permittees are listed alphabetically, by county):

Permittee	Annual payment amount	Permittee	Annual payment amount
Clallam Co.	N/A	Lewis Co.	N/A
Port Angeles	$7,885	Centralia	$6,334
Clark Co.	N/A	Pierce Co.	N/A
Battle Ground	$7,079	Bonney Lake	$6,790
Camas	$7,002	Buckley	$1,882
Vancouver	$67,335	DuPont	$3,226
Washougal	$5,716	Edgewood	$3,916
Cowlitz Co.	$1,384	Fife	$3,340
Kelso	$4,793	Fircrest	$2,581
Longview	$14,687	Gig Harbor	$3,059
Grays Harbor Co.	N/A	Lakewood	$23,938
Aberdeen	$6,693	Milton	$2,661
Island Co.	N/A	Orting	$2,541
Oak Harbor	$9,528	Puyallup	$15,826
King Co.	N/A	Steilacoom	$2,563
Algona	$1,129	Sumner	$3,694
Auburn	$28,182	University Place	$12,836
Bellevue	$50,001	Skagit Co.	$2,094
Black Diamond	$1,705	Burlington	$3,655
Bothell	$13,601	Anacortes	$6,835
Burien	$18,724	Mount Vernon	$12,620

Clyde Hill	$1,157	Sedro Woolley	$4,085
Covington	$7,177	Snohomish Co.	N/A
Des Moines	$11,916	Arlington	$7,030
Duvall	$2,437	Brier	$2,640
Enumclaw	$4,675	Edmonds	$16,640
Federal Way	$36,111	Everett	$42,352
Issaquah	$11,050	Granite Falls	$1,373
Kenmore	$8,401	Lake Stevens	$10,850
Kent	$45,721	Lynnwood	$14,711
Kirkland	$20,187	Marysville	$23,613
Lake Forest Park	$5,224	Mill Creek	$7,608
Maple Valley	$9,410	Monroe	$6,786
Medina	$1,212	Mountlake Terrace	$8,527
Mercer Island	$9,313	Mukilteo	$8,198
Newcastle	$4,050	Snohomish	$3,792
Normandy Park	$2,661	Thurston Co.	$21,395
Pacific	$2,565	Lacey	$16,326
Redmond	$21,899	Olympia	$18,511
Renton	$35,082	Tumwater	$6,823
Sammamish	$16,709	Whatcom Co.	$6,188
SeaTac	$10,533	Bellingham	$31,550
Shoreline	$22,205	Ferndale	$4,561
Tukwila	$7,405		
Woodinville	$4,618		
Kitsap Co.	$28,547		
Bainbridge Island	$9,512		
Bremerton	$14,724		
Port Orchard	$4,439		
Poulsbo	$3,643		

Or

2. **Effectiveness Studies Option #2**: Each Permittee that chooses this option shall conduct stormwater discharge monitoring in accordance with Appendix 9 and the following:

a. By February 2, 2014, each Permittee shall submit to Ecology a draft stormwater discharge monitoring QAPP for review and approval. If Ecology does not request changes within 90 days, the draft QAPP is considered approved. Final QAPPs shall be submitted to Ecology as soon as possible following finalization.

   i. Each Permittee with population fewer than 10,000 in the permit coverage area shall conduct stormwater discharge monitoring at one discharge monitoring location.

   ii. Each Permittee with population equal to or greater than 10,000 but fewer than 50,000 in the permit coverage area shall conduct stormwater discharge monitoring at two discharge monitoring locations.

   iii. Each Permittee with population equal to or greater than 50,000 but fewer than 100,000 in the permit coverage area shall conduct stormwater discharge monitoring at three discharge monitoring locations.

   iv. Each Permittee with population 100,000 or more in the permit coverage area shall conduct stormwater discharge monitoring at four discharge monitoring locations.

b. Permittees shall document in the QAPP why selected discharge monitoring locations are of interest for long term stormwater discharge monitoring and associated stormwater management program effectiveness evaluations. Permittees are encouraged to monitor at locations chosen and submitted in the annual reports that were due March 31, 2011.

c. Flow monitoring at discharge monitoring locations shall be implemented beginning no later than October 1, 2014. Stormwater discharge monitoring shall be fully implemented no later than October 1, 2015. All monitoring shall be conducted in accordance with an Ecology-approved QAPP.

D. Source identification and diagnostic monitoring. Each city and county Permittee listed in S1.D.2.a(i) and S1.D.2.a(ii) shall pay into a collective fund to implement the RSMP Source Identification Information Repository (SIDIR). The payments into the collective fund are due to Ecology annually beginning August 15, 2014. The payment amounts are (Permittees are listed alphabetically, by county):

Permittee	Annual payment amount	Permittee	Annual payment amount
Clallam Co.	N/A	Lewis Co.	N/A
Port Angeles	$731	Centralia	$587

Clark Co.	N/A	Pierce Co.	N/A
Battle Ground	$657	Bonney Lake	$630
Camas	$649	Buckley	$175
Vancouver	$6,245	DuPont	$299
Washougal	$530	Edgewood	$363
Cowlitz Co.	$128	Fife	$310
Kelso	$444	Fircrest	$239
Longview	$1,362	Gig Harbor	$284
Grays Harbor Co.	N/A	Lakewood	$2,220
Aberdeen	$621	Milton	$247
Island Co.	N/A	Orting	$236
Oak Harbor	$884	Puyallup	$1,468
King Co.	N/A	Steilacoom	$238
Algona	$105	Sumner	$343
Auburn	$2,614	University Place	$1,190
Bellevue	$4,637	Skagit Co.	$194
Black Diamond	$158	Burlington	$339
Bothell	$1,261	Anacortes	$634
Burien	$1,736	Mount Vernon	$1,170
Clyde Hill	$107	Sedro Woolley	$379
Covington	$666	Snohomish Co.	N/A
Des Moines	$1,105	Arlington	$652
Duvall	$226	Brier	$245
Enumclaw	$434	Edmonds	$1,543
Federal Way	$3,349	Everett	$3,928
Issaquah	$1,025	Granite Falls	$127
Kenmore	$779	Lake Stevens	$1,006
Kent	$4,240	Lynnwood	$1,364
Kirkland	$1,872	Marysville	$2,190
Lake Forest Park	$484	Mill Creek	$706
Maple Valley	$873	Monroe	$629
Medina	$112	Mountlake Terrace	$791
Mercer Island	$864	Mukilteo	$760

Newcastle	$376	Snohomish	$352
Normandy Park	$247	Thurston Co.	$1,984
Pacific	$238	Lacey	$1,514
Redmond	$2,031	Olympia	$1,717
Renton	$3,253	Tumwater	$633
Sammamish	$1,550	Whatcom Co.	$574
SeaTac	$977	Bellingham	$2,926
Shoreline	$2,059	Ferndale	$423
Tukwila	$687		
Woodinville	$428		
Kitsap Co.	$2,647		
Bainbridge Island	$882		
Bremerton	$1,365		
Port Orchard	$412		
Poulsbo	$338		